ICF-C1000

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model

SPECIFICATION

Frequency range

Countries	Frequency range
IT, EA, AE6, AE7 model	FM: 87.6-107.5 MHz AM: 531-1,602 kHz
US, CND, AEP, UK, E, FR model	FM: 76-108 MHz AM: 530-1,710 kHz

Intermediate frequency (IT model only)
FM: 10.7 MHz
AM: 455 kHz

Antennas — FM: FM wire antenna
AM: Built-in ferrite bar antenna

Speaker — Approx. 4.5 cm ($1^{13}/_{16}$ inches) dia.

Output — Earphone jack (minijack)

Power output — 80 mW (at 10% harmonic distortion)

Power requirements — Radio: 3 V DC, two R6 (size AA) batteries
Clock: 3 V DC, one CR2025 lithium battery

Battery life — Approx. 45 hours, using Sony battery SUM-3 (NS)
Approx. 1 year of clock operation, using Sony CR2025 lithium battery

Dimensions — Approx. 110 × 33.6 × 70 mm (w/h/d)
($4^{3}/_{8} \times 1^{3}/_{8} \times 2^{7}/_{8}$ inches)
incl. projecting parts and controls (with the lid closed)

Weight — Approx. 230 g (8 oz.)
incl. batteries (two R6 batteries and one lithium battery)

Accessory supplied — Sony CR2025 lithium battery (1)

Design and specifications subject to change without notice.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

- CND : Canadian model
- IT : Italian model
- FR : French model
- EA : Saudi Arabia model

FEATURES

ICF-C1000 is an FM/AM radio combined with a world time alarm clock.
- You can easily see the local time at the desired time zone in the world.
- You can switch the digital display to the summer time (daylight saving time) indication.
- A compact size allows you to take it with you when you travel.
- The alarm clock allows choice of awakening to radio or buzzer alarm.
- FM wire antenna can be kept in the unit.
- LCD display is lit up so that you can see the time indication in the dark.

FLEXIBLE CIRCUIT BOARD REPAIRING

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (withim 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

NOTES ON CHIP COMPONENT REPLACEMENT

- Never reuse a disconnected chip component.
- Notice thet the minus side of a tantalum capacitor may be damaged by heat.

使用時は添付資料も参照のこと
Refer to the additional documents.

FM/AM WORLD TIME CLOCK RADIO

SONY®

SERVICING NOTES

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

ADVARSEL !

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Lever det brugte batteri tilbage til leverandȼren.

ADVARSEL

Lithiumbatteri-Eksplosjonsfare.
Ved utskifting benyttes kun batteri som
anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandȼren.

VARNING

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

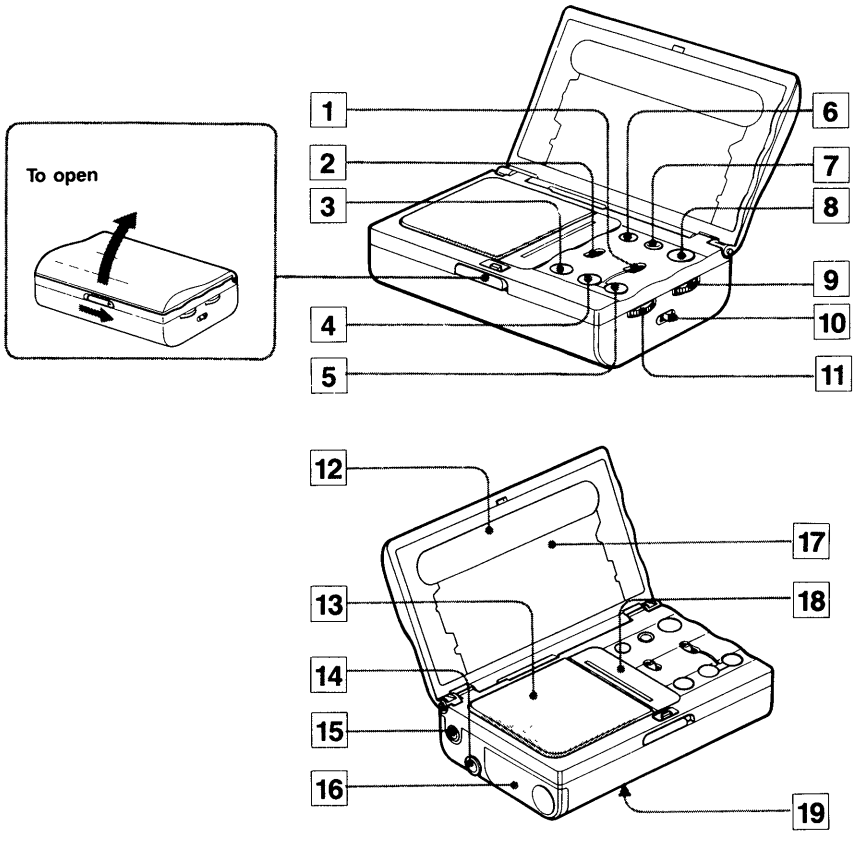
VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of Controls



1 TIME SET selector (CLOCK/ALARM/WORLD T. (time)/LOCK)
2 ALARM MODE selector (BUZZER/RADIO/OFF)
3 OFF/ALARM RESET button
4 ADJ. (adjustment) – button
5 ADJ. (adjustment) + button
6 LIGHT button
7 D.S.T. (Daylight Saving Time)/SUMMER T. (time) button
8 ON (AUTO OFF) button
9 TUNING control
10 BAND selector (FM/AM)
11 VOLUME control
12 Display window
13 Speaker
14 FM wire antenna
15 Ω (earphone) jack
16 BATT (battery) compartment
17 Time zone map
18 Dial scale
19 WIND antenna reel (bottom)

Installing Batteries

B To open the BATT compartment lid
While pressing the lid, slide it in the direction of the arrow.

C For Clock Operation

Insert the battery with the flat (+) side facing upwards, until it is locked in position.

D To remove the battery
Insert a ball-point pen or a similar object into the hole as illustrated and while pressing it in the direction of the arrow, pull out the battery.

Notes on lithium battery

- Keep the lithium battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to install the battery with the correct polarity.
- Do not hold the battery with metallic tweezers as doing so may cause a short-circuit.
- Do not break up the battery nor throw it into a fire, which might cause it to explode. Carefully dispose of the used battery.
- If you remove the lithium battery after setting the clock, the display will be cleared. Set the clock again.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

E For Radio Operation

Insert two R6 (size AA) batteries with correct polarity.

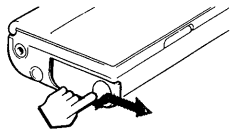
F If the battery compartment lid is detached by an accidental drop, excessive force, etc., attach it as shown in the illustration.

Note
When the unit is not to be used for a long period of time, remove the batteries to avoid damage from battery leakage and corrosion.

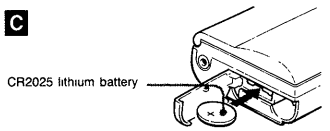
Battery replacement

- When the sound becomes distorted or unstable, replace both R6 (size AA) batteries.
- When the display becomes dim, replace the CR2025 lithium battery. The radio cannot be turned on when the lithium battery is exhausted.
  On battery life, see "Specifications".

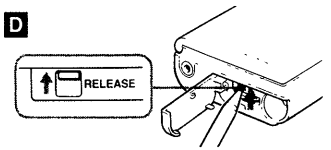
B



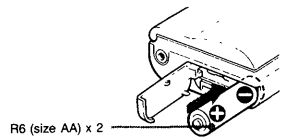
C



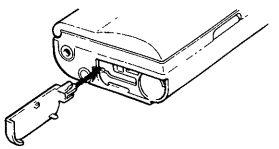
D



E



F



Setting the Clock

The display window will show 12:00 (noon) indication when the CR2025 lithium battery is first installed.

1 Set the TIME SET selector to WORLD T. (time).

2 Press the ADJ. + or − button to select the time zone you want to set the time of.
(For example, if you want to set the local time in Tokyo, move the ■ mark to the "+9" position.)

3 Keep the TIME SET selector pressed to CLOCK, and then press the ADJ. + or − button to set the time.
When the ADJ. + or − is kept pressed, the minute digits advance rapidly.
The hour digits advance one by one at the same time the minute digits advance to "00" after "59".

4 Set the TIME SET selector to LOCK.
When the TIME SET selector is released from CLOCK, the ":" mark stops blinking and the clock will now start.

To set the time to the second
After step 3, release the TIME SET selector simultaneously with the radio or telephone time signal.

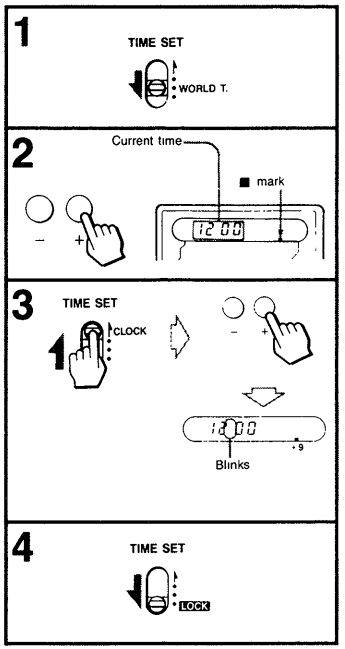
G To Check the Local Time of the Desired Time Zone

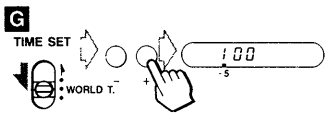
Example: To check the local time in New York
Set the TIME SET selector to WORLD T. and press the ADJ. + or − button to move the ■ mark to the "−5" position.

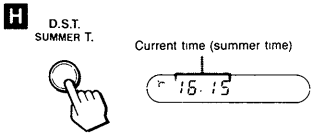
If you want to know the local time and the difference in time is 30 minutes units, add it to the current time (or subtract it from the current time). (For example, the difference in time is five hours and 30 minutes, eight hours and 30 minutes, etc.)

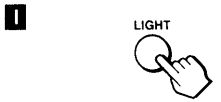
H To change the display to the daylight saving time (summer time) indication
Press the D.S.T./SUMMER T. button.
The ☼ mark appears on the display window and time indication changes to the summer time.
To cancel the summer time indication, press the D.S.T./SUMMER T. button again.

I To see the clock in the dark
Press the LIGHT button.
The display window is lit up for about ten seconds.









Listening to the Radio

1 Press the ON button.

2 Select the desired band.

3 Tune in the desired station.

4 Adjust the volume.

To turn off the radio, press the OFF/ALARM RESET button.

Note

The radio will turn itself off automatically after about one hour, even if it is not turned off manually.

J For improved reception

FM: Pull the FM wire antenna out fully (approx. 50 cm/19 3/4 inches) and adjust its direction.

AM: Rotate the unit horizontally.

Note

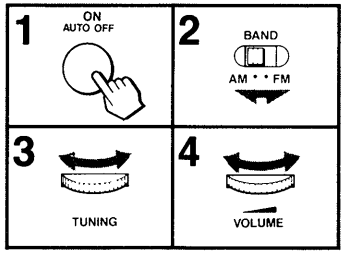
Keep the unit away from metallic objects. They may cause interference or difficulty in tuning.

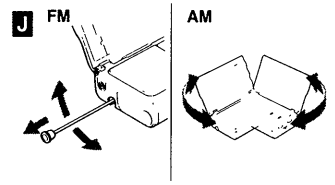
K To wind up the FM wire antenna

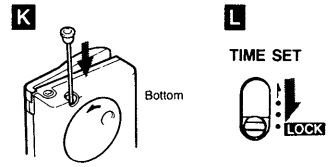
Turn the WIND antenna reel counterclockwise.

L Note on LOCK function

When the TIME SET selector is set to LOCK, the + and – buttons do not function. This enables you to avoid misoperation.







Setting the Alarm

For radio alarm, first tune in the desired station and adjust the volume.

1 Set the ALARM MODE selector to BUZZER or RADIO

2 Set the TIME SET selector to ALARM.

3 Press ADJ. + or – to set the alarm time.

4 Set the TIME SET selector to LOCK.

The ":" mark will stop blinking.

The desired alarm sound will come on at the preset time and will automatically turn itself off after 60 minutes, unless it is turned off manually.

M To stop the alarm sound, press the ALARM RESET button or set the ALARM MODE selector to OFF. However, the radio does not turn itself off even if the ALARM MODE selector is set to OFF while the radio is on.

Note

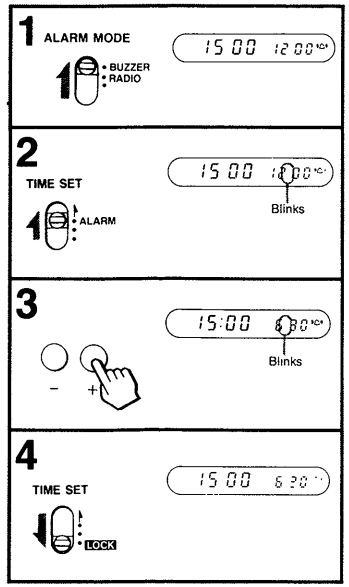
- When the ALARM MODE selector is set to OFF and the TIME SET selector is set to a position other than ALARM, the alarm time indication does not appear on the display window.
- Be sure to set the TIME SET selector to LOCK in step 4. The alarm will not sound if you set the TIME SET selector to a position other than LOCK.

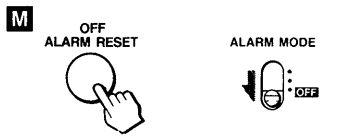
To wake to the alarm sound at the same time the next day

Stop the alarm sound by pressing the ALARM RESET button. Leave the ALARM MODE selector to BUZZER or RADIO.

Notes

- The buzzer sound level cannot be adjusted.
- If the radio is on and the earphone is connected to the (Ω) jack, at the preset alarm time, the buzzer alarm is heard from both the earphone and the speaker
- If the radio is off and the earphone is connected to the (Ω) jack, at the preset alarm time, the buzzer alarm is heard only from the speaker and the radio alarm is heard only from the earphone
- The "⏰" mark blinks on the display window at the preset alarm time.

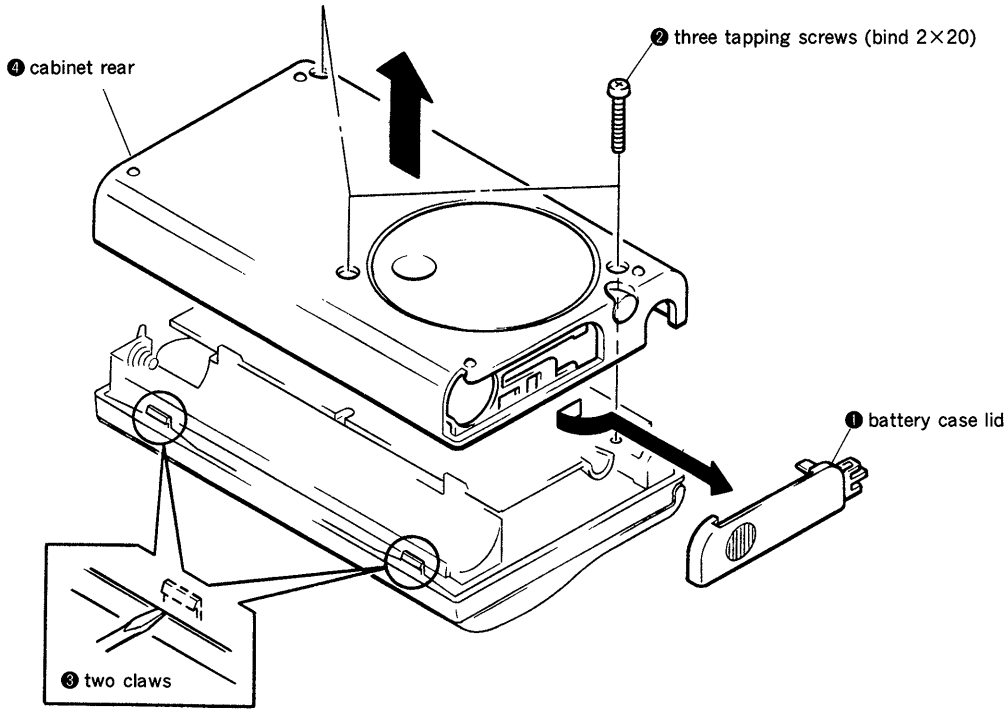




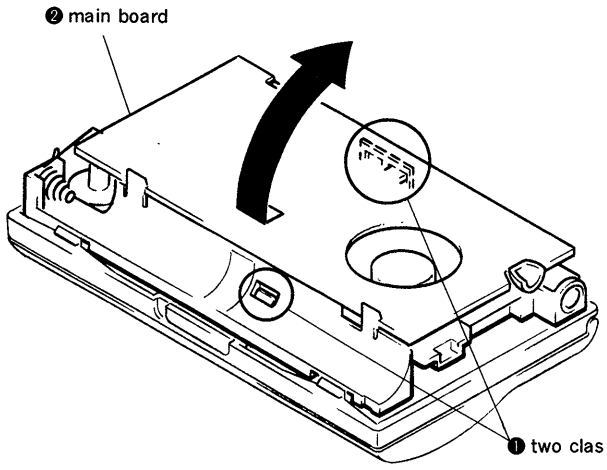
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

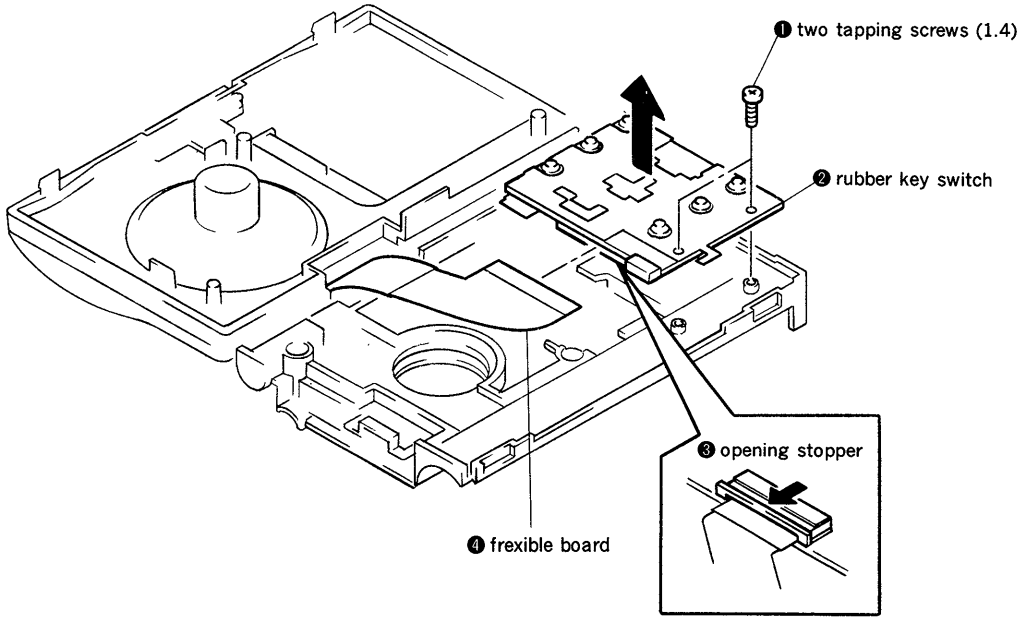
2-1. CABINET (REAR)



2-2. MAIN BOARD

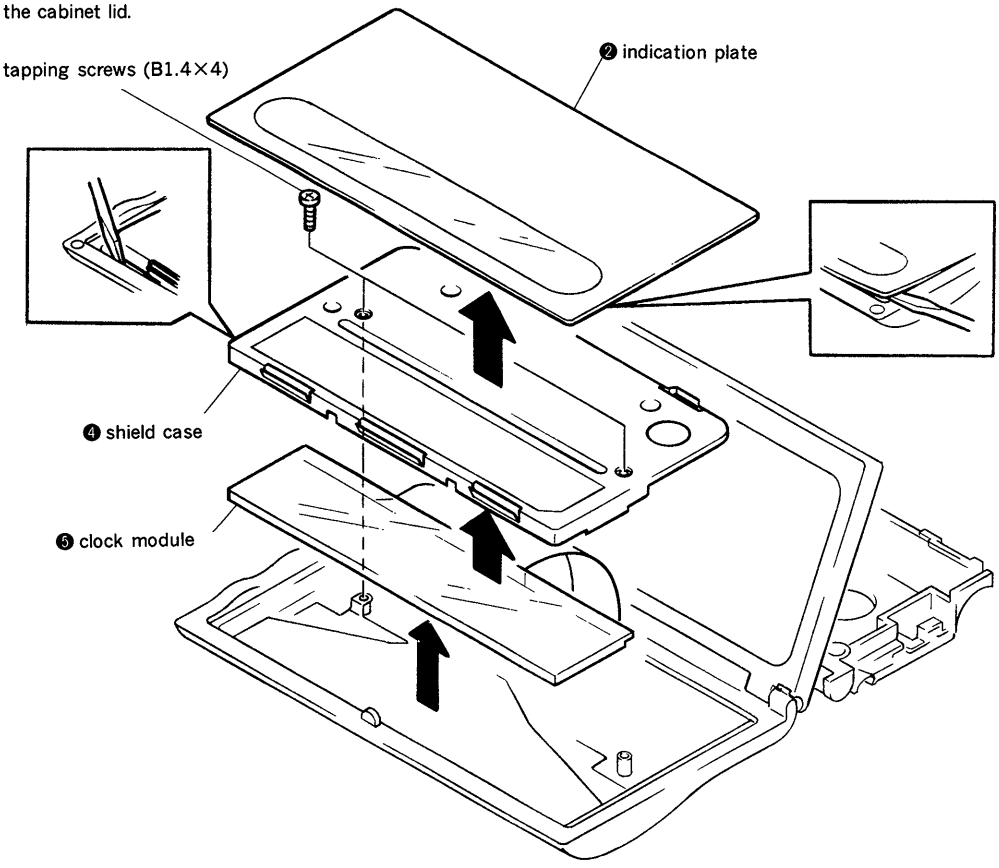


2-3. RUBBER KEY SWITCH



2-4. CLOCK MODULE

❶ Opening the cabinet lid.

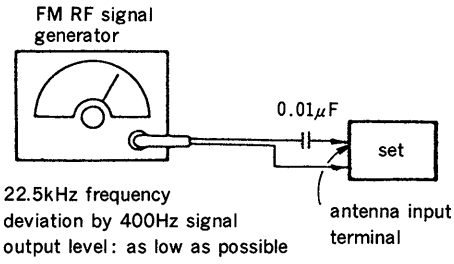


SECTION 3
ELECTRICAL ADJUSTMENTS

• FM Section

Setting :

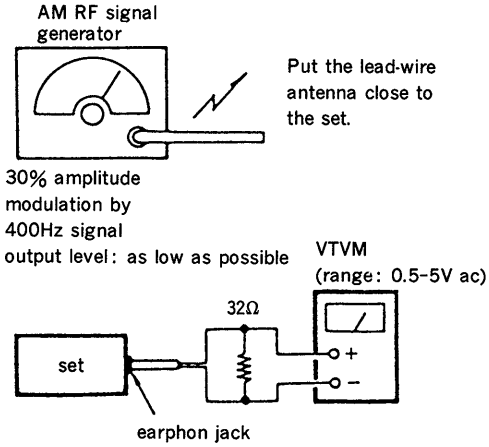
BAND switch : FM


FM RF signal generator
0.01μF
set
22.5kHz frequency deviation by 400Hz signal output level : as low as possible
antenna input terminal

• AM Section

Setting :

BAND switch : AM


AM RF signal generator
Put the lead-wire antenna close to the set.
30% amplitude modulation by 400Hz signal output level : as low as possible
VTVM (range : 0.5-5V ac)
32Ω
set
+
−
earphon jack

• Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L3	CT4
75MHz (87.35MHz)	109.5MHz (108.05MHz)

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	CT3
80MHz (87.35MHz)	104MHz (108.05MHz)

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	CT2
520kHz (520kHz)	1,750kHz (1,650kHz)

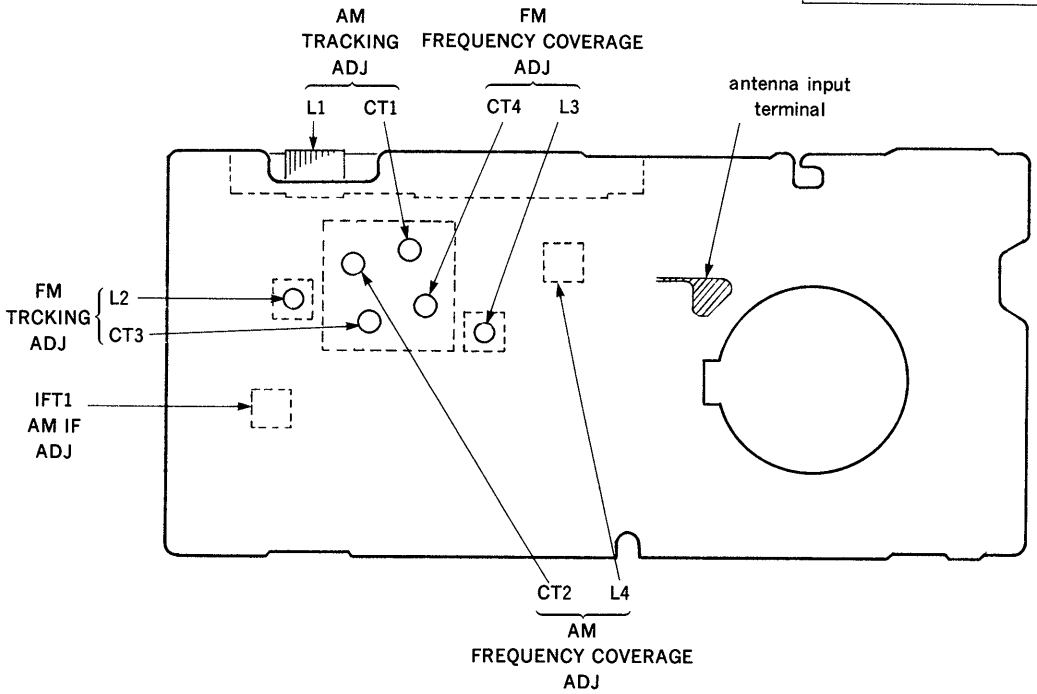
AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1	CT1
620kHz (620kHz)	1,400kHz (1,400kHz)

AM IF ADJUSTMENT
Adjust for a maximum reading on VTVM.
IFT1
455kHz

no mark : US, CND, AEP, UK, E, FR model
( ) : IT, EA, AE6, AE7 model

- CND : Canadian model
- IT : Italian model
- FR : French model
- EA : Saudi Arabia model

Adjustment Location : main board (conductor side)



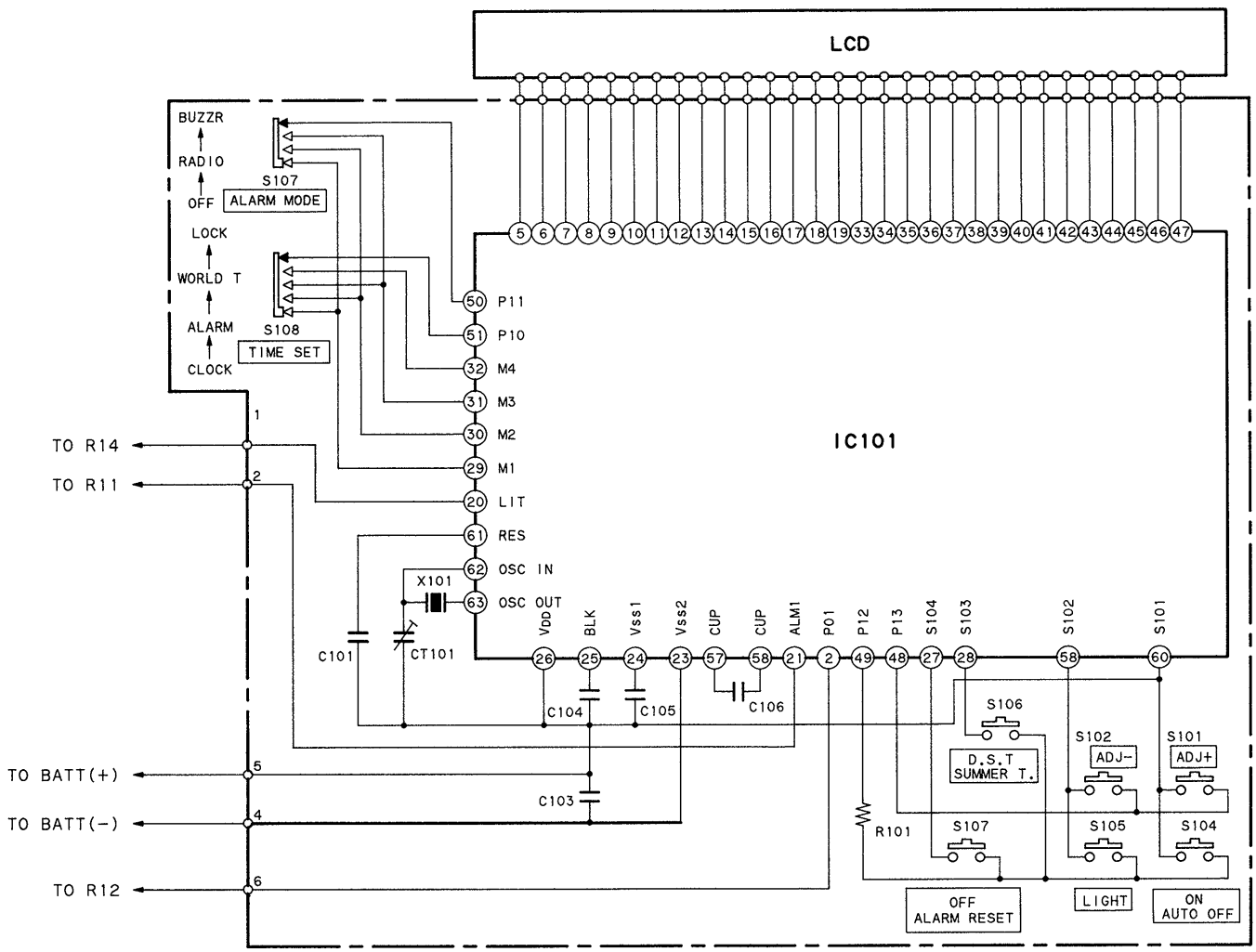
SECTION 4
DESCRIPTION OF FEATURES OF THE CLOCK MODULE

If broken, the netire clock module must be replaced as a unit.
Alhtough it cannot be repaired, the following is a description of its internal features.

1. Basic Features

a. Capable of controlling a radio, the microcomputer can display the world time.
b. The clock is capable of displaying the world time using 24 separate points representing each hour of the day. (The hour display shifts one hour as represented by the advance of an LCD mark.)
c. Includes a 1-hour shift daylight savings time function.
d. Includes a 3-opsition alarm switch. (Alarm sounds for up to one hour.)
① Buzzer ② Radio ③ OFF
e. Includes a snooze function to delay the alarm nine minutes. (Not used on this set.)
f. Includes a sleep function to delay the alarm for one hour.
g. Includes a lamp function which lights for ten seconds.
h. Displays 24-hour time without using AM/PM.

SCHEMATIC DIAGRAM CLOCK MODULE BLOCK



2. Each Function

A. SLEEP (AUTO OFF) Key (S104)

① The sleep function is disabled while the alarm is going off if the ALARM mode has been set to RADIO.

② The sleep function is disabled if the clock is already in SLEEP mode.

③ SLEEP mode is set to ON when the SLEEP (AUTO OFF) key (S104) is pressed.

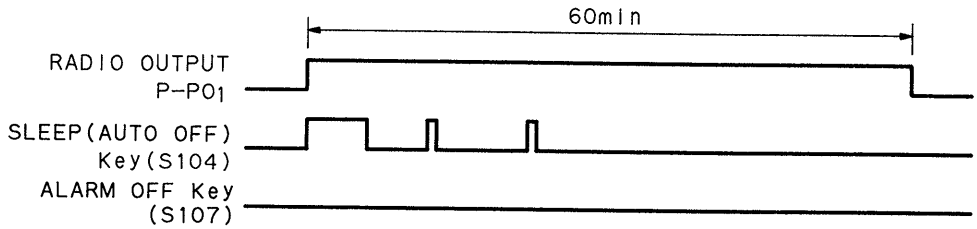
④ SLEEP mode goes OFF 60 minutes after it has been set to ON. However,sleep mode will not go OFF if the TIME mode has been set to TIME ADJUST.(See item G-①-b.)

⑤ SLEEP mode can be forced OFF by pressing the ALARM OFF key (S107).

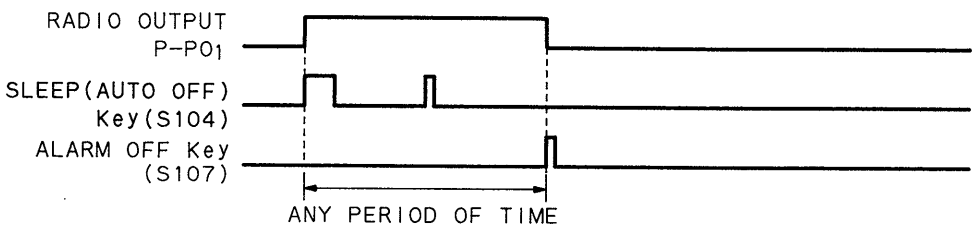
⑥ The output termianl,Pin No. 2 on IC101, is called P-$P0_1$.
The output current is 450 μA.

⑦ Timing of Signals During SLEEP Mode

a. When SLEEP mode goes OFF automatically



b. When SLEEP mode is forced OFF



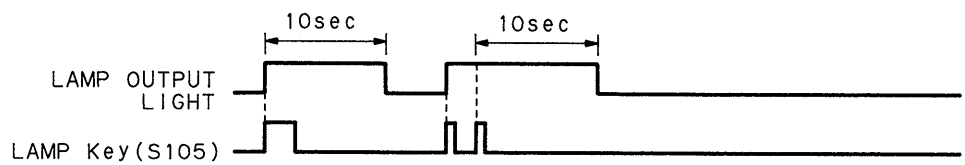
B. LAMP key (S105)

① Lamps light for ten seconds when pushed once.

② Lighting time is extended ten seconds if the LAMP key (S105) is pressed once more while lamps are already lit.

③ The output terminal,Pin No. 20 on IC101,is called LIGHT.

④ Timing of Signals During LAMP Mode



C. DAYLIGHT SAVINGS TIME key (S106)

① A switch is made between standard time and daylight savings time each time the DAYLIGHT SAVINGS TIME key (S106) is pressed.

② When daylight savings time is ON, one hour is added to the current time.

③ The daylight saving time display mark is lit during daylight savings time and turned off buring standard time.

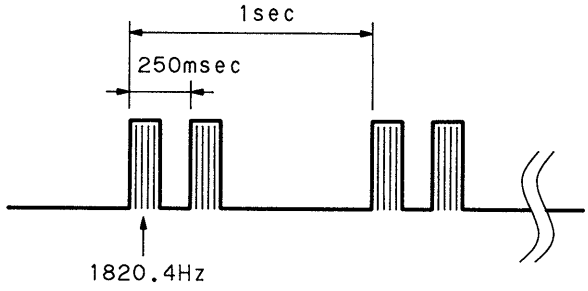
D. ALARM Mode Settings

① BUZZER Position

a. When the alarm begins sounding,the signal shown below is output form Pin NO. 21, ALM1 of IC101 and the bell mark display begins blinking at a cycle of once every 500 msec.

b. The LCD should display the time set for the alarm and the bell mark.

c. If uninterrupted by other means,the output signal stops 60 minutes after the alarm begins sounding.



Output Signal

② RADIO Position

a. when the alarm beging sounding, the P-P0$_1$ signal of Pin No. 2 of IC101 is forced from to high output (V DD level; 450-μA output current) and the bell mark display begins blinking at a cycle of once every 500 msec.

b. The LCD should display the time set for the alarm and the bell mark.

c. If uninterrupted by other means,the P-P0$_1$ signal will go from high to low 60 minutes after the alarm begins sounding.

③ OFF Position

a. The alarm does not operate when the ALARM mode is set to this position.

b. None of the alarm-related LCDs should light.

④ The alarm will stop sounding if the ALARM mode is set to OFF while the alarm is on.

⑤ Any of the three modes described are enabled within a maximum of 500 msec.of the time they are selected.

E. ALARM OFF key (S107)

① As described under A., the BUZZER mode for the alarm can be forced OFF using this key any time during SLEEP mode.

② As described in D- ① and D- ②, the alarm can be forced OFF using this key any time after it begins sounding.

F. SNOOZE key (S103) (Not used on this set)

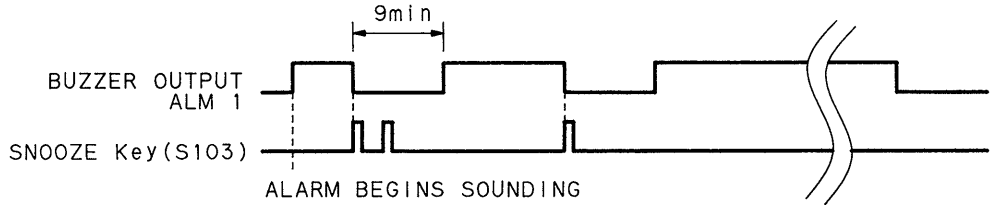
① As described in D- ① and D- ②,depending on the ALARM mode,either ALM1 of Pin No. 21 of IC101 or P-P0_1 of Pin No. 2 of IC101 will go from high to low if the SNOOZE key (S103) is pressed while the alarm is sounding.The signal will return from low to high nine minutes later.

② The SNOOZE function may be used a maximum of six times during the 60-minute period that the alarm sounds.

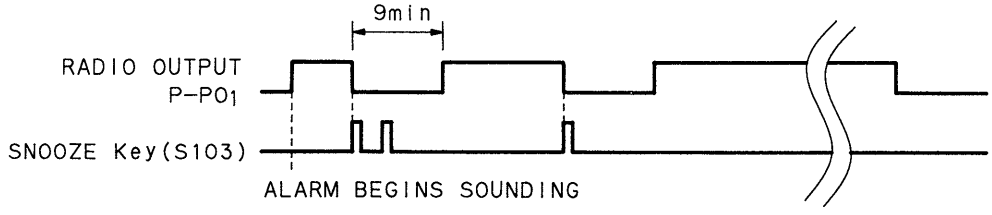
③ Note that D- ② above for the SNOOZE function differs from the operation of the sleep function which is disabled during SLEEP mode.

④ Timing of Signals During SNOOZE Mode

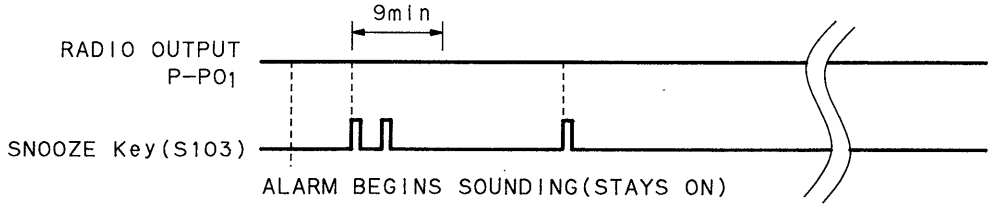
a. When the ALARM mode is set to BUZZER



b. When the ALARM mode is set to RADIO



b. When SLEEP is activated when the ALARM mode is RADIO



G. TIME Mode Settings

① TIME ADJUST (Correct Current Time)

a. Set the switch to this position when you wish to correct the current time.

b. The second counter stops when the switch is set to this position

c. The colons in the LCD display of the current time blink at a cycle of once every 500 msec.

d. The seconds are cleared to zero and the new time count begins when another mode is entered.(No seconds are displayed.)

② ALARM ADJUST (Correct Alarm Setting)

a. Set the switch to this position when you wish to correct the alarm setting.

b. The colons in the LCD display of the alarm time blink at a cycle of once every 500 msec.

c. The alarm time is displayed in the LCD when this switch is set to ALARM ADJUST regardless of the current ALARM mode setting described in under D.

③ WORLD TIME ADJUST (Correct World Time)

a. Set the switch to this position when you wish to correct the world time.

b. The colons in the LCD display of the world time blink at a cycle of once every 500 mses.

④ LOCK

a. Set the switch to this position when you wish put the clock in normal operation mode.

b. The UP and DOWN keys are disabled when this switch is set to the LOCK position . (They are enabled in the positions described in ①, ② and ③ above.)

⑤ Any of the four modes described are enabled within a maximum of 500 msec.of time they are selected.

H. UP key (S101)

① This key is disabled when the CLOCK mode is set to LOCK. (See item G- ④-b.)

② The UP key functions as follows when correcting the current time.

a. The current time is advanced one minute each time the UP key is pressed.

b. The minutes will advance at rate of one minute per 31.25 msec. realtime if the UP key is held down for more than 0.5 to 1.0 sec.

c. If the current time is corrected during SLEEP mode beyond the 60 minute range the mode is activated it will be turned off. (This is the same for SNOOZE mode with a range of nine minutes.)

d. If the current time is corrected to or past the alarm time setting and the ALARM mode is set to either BUZZER or RADIO, the alarm will begin to sound.The alarm will stop sounding if the time is corrected beyond the 60 minute range that alarm is enabled. (See items D-① and D- ②.)

e. Use of the DOWN key will not decrease the remaining time for the alarm once it has begun sounding due to the UP key as that described in items c and d above.

③ The UP key functions as follows when correcting the alarm setting.

a. The minutes will advance at rate of one minute per 31.25 msec. realtime if the UP key is held down for more than 0.5 to 1.0 sec.

b. The minutes will abvance at a rate of one minute per 31.25 msec. realtime if the UP key is held down for more than 0.5 to 1.0 sec.

c. The alarm will not sound while being set even if the setting passes the current time.

④ The UP key functions as follows when correcting the worid time.

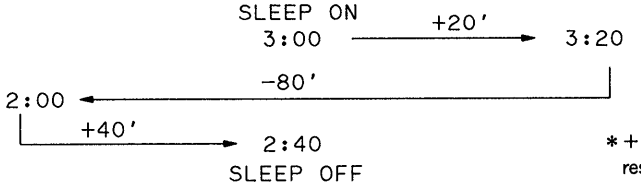
a. The hours will advance and the world position will shift to the right each time the UP key is pressed.

b. The hours will advance at a rate of one minute per 31.25 msec.
realtime if the UP key is held down for more than 0.5 to 1.0 sec.

c. The alarm will not sound even if the world time passes the alarm time setting while being corrected.

Example

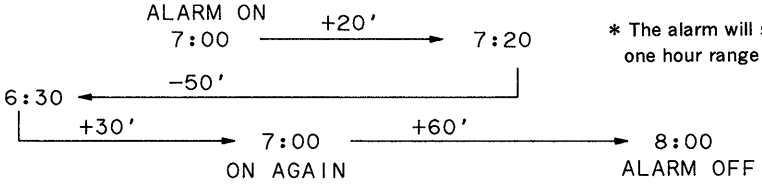
1) key operation as related to SLEEP mode



* +and−represent the use of the UP and DOWN keys, respectively.

* SLEEP mode goes OFF if the time is incremented a total of 60 minutes beyond the point the mode began.

2) key operation as related to ALARM mode



* The alarm will sound every time the setting is advanced into the one hour range for which it is enabled.

I. DOWN key (S101)

① This key is disabled when the CLOCK mode is set to LOCK. (See item G- ④-b.)

② The DOWN key functions as follows when correcting the current time.

a. The current time is decreased one minute each time the DOWN key is pressed.

b. The minutes will decrease at a rate of one minute per 31.25 msec. realtime if the UP key is held down for more than 0. 5 to 1.0 sec.

c. The alarm will not sound even if the current time enters the one hour range for which the alarm is enabled while the current time is being set with the DOWN key.

d. Use of the DOWN key will not decrease the remaining time for either SLEEP mode or SNOOZE mode once either has begun when correcting the current time.

③ The DOWN key functions as follows when correcting the world time.

a. The hours will decrease and the world position will shift to the left each time the DOWN key is pressed.

b. The hours will advance at a rate of one minute per 31.25 msec.
realtime if the DOWN key is held down for more than 0.5to 1.0 sec.

c. The alarm will not sound even if the world time matches the alarm time setting while being corrected.

J. Initial Settings

① Current time and alarm setting time
Both set to 12:00. (The alarm dose not sound.)

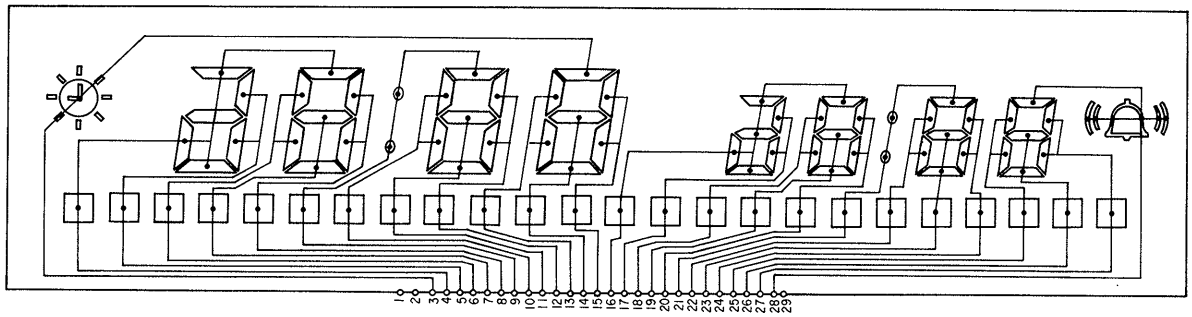
② World position
The world is set the 12th mark to left of the ▼ mark.

③ Daylight savings time
Daylight savings time is set to OFF.

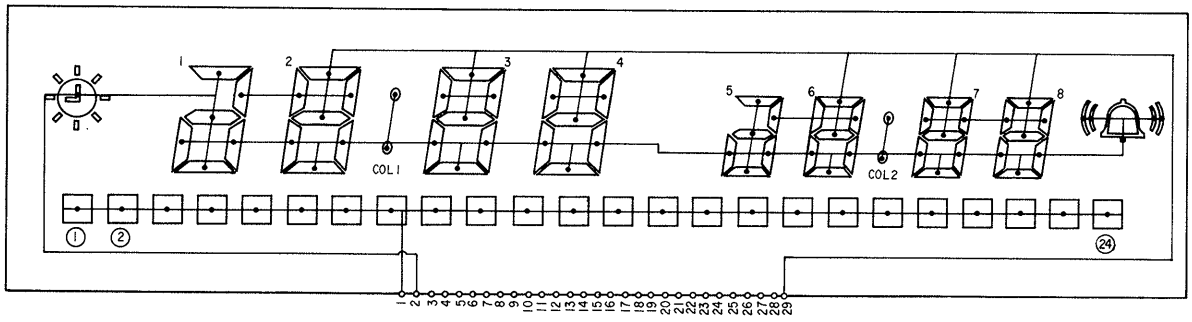
K. Reset function
Initial settings can be enabled by pressing S104, S105, S106 and S107 all simultaneously.

LIQUID CRYSTAL DISPLAY

SEGMENT



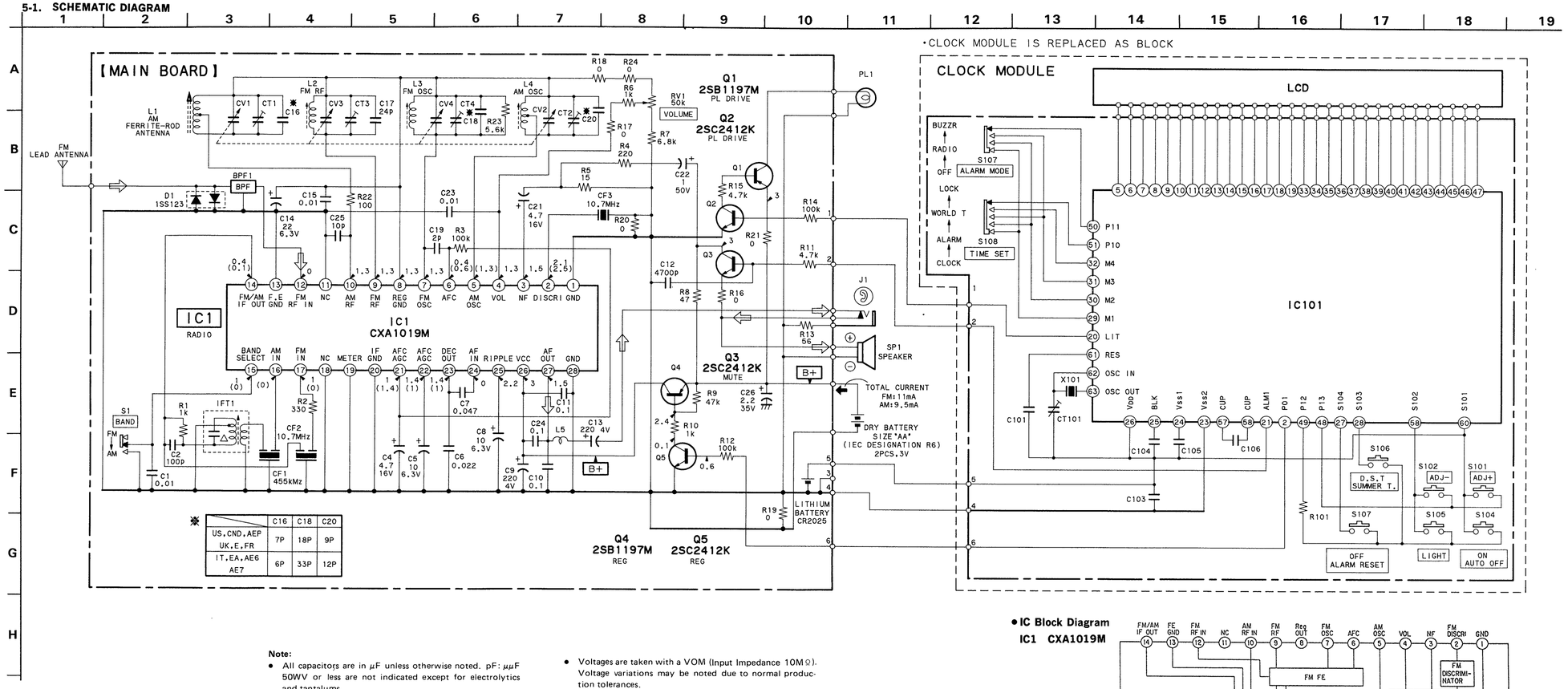
COMMON



ICF-C1000 ICF-C1000

SECTION 5
DIAGRAMS

5-1. SCHEMATIC DIAGRAM



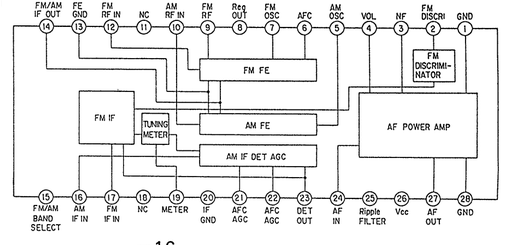
	C16	C18	C20
US,CND,AEP UK,E,FR	7P	18P	9P
IT,EA,AE6 AE7	6P	33P	12P

Note:

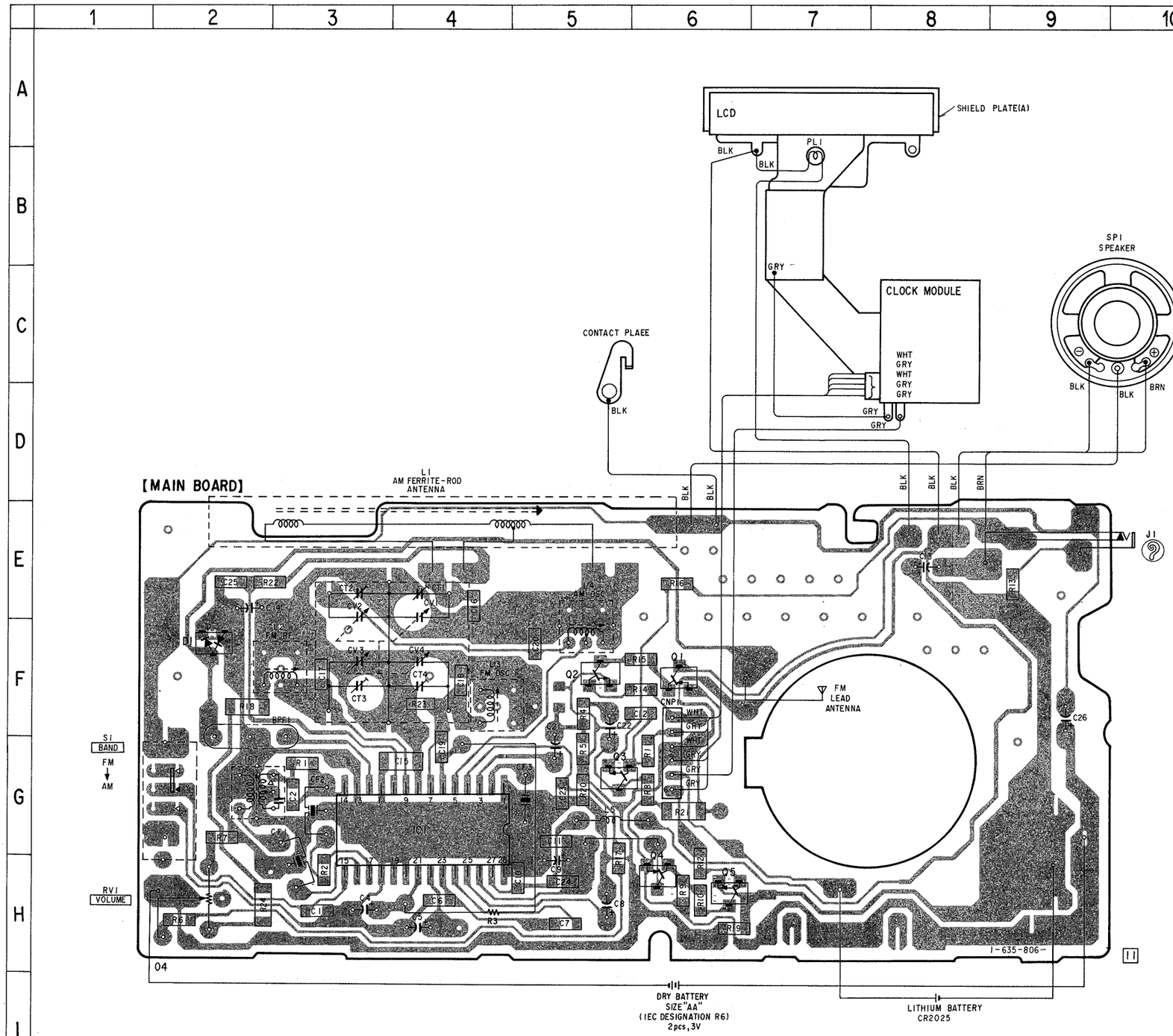
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- Power voltage is dc 3V and fed with regulated dc power supply fmom battery terminal.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

- CND : Canadian model
- IT : Italian model
- FR : French model
- EA : Saudi Arabian model

• IC Block Diagram
IC1 CXA1019M

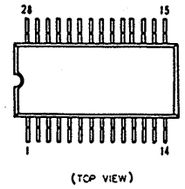


5-2. PRINTED WIRING BOARD

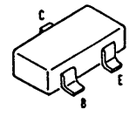


• Semiconductor Lead Layouts

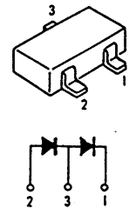
CXA1019M



2SB1197K-R
2SC2412K-R



1SS226



• Semiconductor Location.

Ref. No.	Location
D1	F-2
IC1	G-4
Q1	F-6
Q2	F-5
Q3	G-5
Q4	H-6
Q5	H-6

Note:

- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.

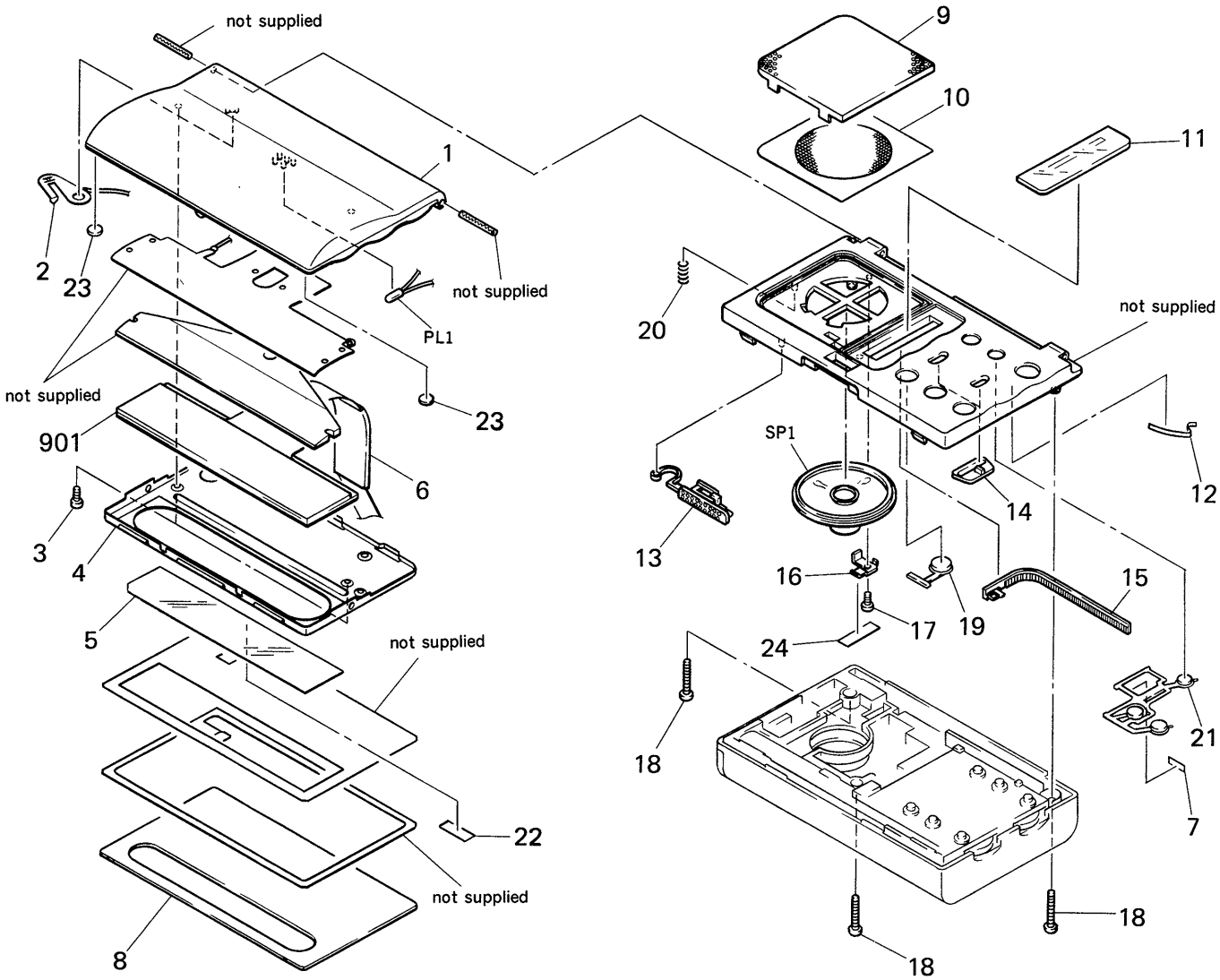
SECTION 6
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

- CND : Canadian model
- IT : Italian model
- FR : French model
- EA : Saudi Arabian model

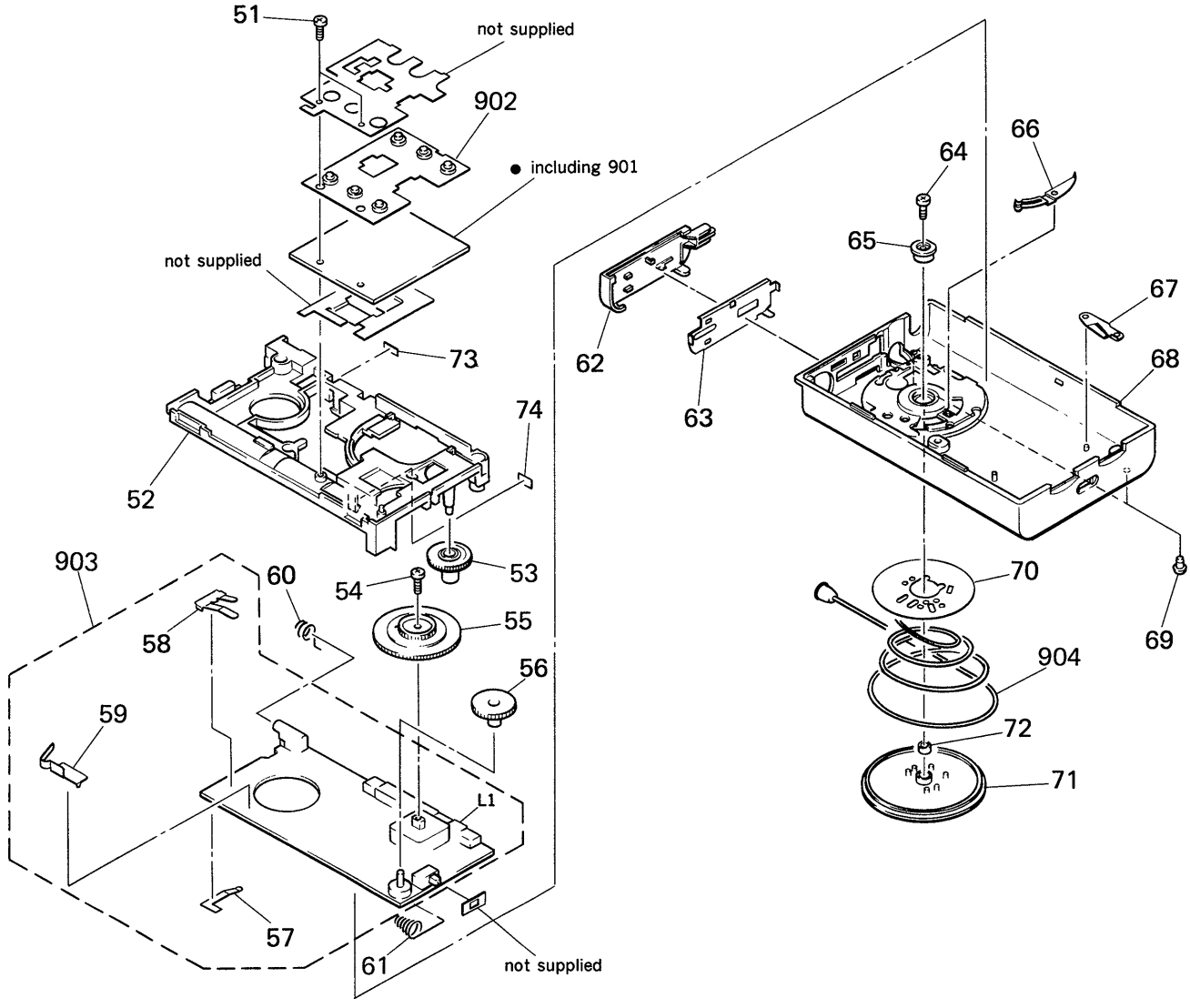
6-1 CABINET (LID, FRONT)



Ref.No	Part No.	Description	Remarks
1	X-3362-154-1	LID, CABINET ASSY	
2	3-364-239-01	SPRING (LID), CONTACT	
3	3-894-747-11	SCREW (B1.4X4), TAPPING	
4	*3-903-524-01	CASE, SHIELD	
5	*3-903-520-01	SHEET, CONDUCTIVE	
6	*3-363-920-01	SHEET, SHIELD	
7	*3-365-362-01	SPACER (KNOB)	
8	3-903-506-01	PLATE, INDICATION	
9	3-903-510-01	PANEL, SP	
10	*3-903-503-01	CUSHION	
11	3-903-519-01	(US, CND, AEP, UK, E, FR)....SCALE, DIAL	
11	3-903-519-11	(IT, EA, AE6, AE7)....SCALE, DIAL	
12	3-363-168-01	SPRING, PUSH	
13	3-903-527-01	KNOB (LOCK)	
14	3-903-529-01	KNOB (SELECT)	

Ref.No	Part No.	Description	Remarks
15	3-903-525-01	POINTER	
16	*3-364-238-01	CLAW, SPEAKER	
17	3-318-203-61	SCREW (B 1.7X6), TAPPING	
18	4-356-741-41	SCREW, TAPPING (BIND 2X20)	
19	3-363-167-01	BUTTON (POWER OFF)	
20	3-364-833-01	SPRING, COMPRESSION	
21	*3-363-926-01	PLATE, CONDUCTIVE	
22	*3-365-052-01	SHEET (LID), CONDUCTIVE	
23	3-831-441-11	SPACER (C)	
24	9-911-835-XX	SPACER	
901	1-809-142-11	(EXCEPT US)....CLOCK MODULE	
901	1-809-142-21	(US)....CLOCK MODULE	
PL1	1-518-669-11	LAMP, PILOT	
SP1	1-503-552-11	SPEAKER	

6-2 CABINET (REAR), CHASSIS



Ref.No	Part No.	Description	Remarks
51	3-309-597-21	SCREW (1.4), TAPPING	
52	*3-903-533-01	CHASSIS	
53	3-903-518-01	KNOB (TUNE)	
54	3-880-990-00	SCREW (1.7X3),FLAT,(+) SPECIAL	
55	3-903-514-01	GEAR (TUNING CAPACITOR)	
56	3-903-516-01	KNOB (VOL)	
57	3-903-512-01	PLATE (C), CONTACT	
58	3-903-501-01	TERMINAL (-), BATTERY	
59	3-903-502-01	TERMINAL (+), BATTERY	
60	3-363-924-01	SPRING (E.P)	
61	3-903-505-01	SPRING, BATTERY COIL	
62	3-903-521-01	LID, BATTERY CASE	
63	3-903-523-01	TERMINAL, BATTERY	
64	7-621-772-00	SCREW +B 2X3	
65	3-903-517-01	BEARING	
66	3-903-509-01	PLATE (B), CONTACT	
67	3-364-240-01	SPRING (FOOT), CONTACT	
68	3-903-534-01	CABINET (REAR)	
69	3-363-921-01	FOOT (CONTACT)	
70	3-903-507-01	PLATE (A), CONTACT	
71	3-903-522-01	REEL	
72	3-363-165-01	BRACKET, OUTSERT	
73	3-831-441-XX	CUSHION	
74	*3-365-058-01	SPACER (CH)	
902	*1-572-447-11	SWITCH, RUBBER KEY	
903	*A-3661-146-A	(IT, EA, AE6, AE7).... PC BOARD ASSY, MAIN(NARROW)	
903	*A-3661-147-A	(US, CND, AEP, UK, E, FR).... PC BOARD ASSY, MAIN (WIDE)	57-59, LP1
904	1-590-004-11	CORD, ANTENNA	

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

- CND : Canadian model
- IT : Italian model
- FR : French model
- EA : Saudi Arabian model

Ref.No	Part No.	Description
901	1-809-142-11	(EXCEPT US)....CLOCK MODULE
901	1-809-142-21	(US)....CLOCK MODULE
902	*1-572-447-11	SWITCH, RUBBER KEY
903	*A-3661-146-A	(IT, EA, AE6, AE7).... PC BOARD ASSY, MAIN(NARROW)
903	*A-3661-147-A	(US, CND, AEP, UK, E, FR).... PC BOARD ASSY, MAIN (WIDE)
904	1-590-004-11	CORD, ANTENNA
BPF1	1-235-170-00	(US, CND, AEP, UK, E, FR).... FILTER, BAND PASS
BPF1	1-235-171-00	(IT, EA, AE6, AE7)....FILTER, BAND PASS

CAPACITOR

C1	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C2	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C4	1-126-163-11	ELECT	4.7MF	20%	16V
C5	1-126-157-11	ELECT	10MF	20%	6.3V
C6	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C7	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C8	1-126-157-11	ELECT	10MF	20%	6.3V
C9	1-124-635-00	ELECT	220MF	20%	4V
C10	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C11	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C12	1-163-017-11	CERAMIC CHIP	0.0047MF		50V
C13	1-124-635-00	ELECT	220MF	20%	4V
C14	1-126-153-11	ELECT	22MF	20%	6.3V
C15	1-163-059-00	CERAMIC CHIP	0.01MF		50V
C16	1-163-090-00	(US, CND, AEP, UK, E, FR).... CERAMIC CHIP	7PF	0.25PF	50V
C16	1-163-089-00	(IT, EA, AE6, AE7).... CERAMIC CHIP	6PF	0.25PF	50V
C17	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C18	1-163-099-00	(US, CND, AEP, UK, E, FR).... CERAMIC CHIP	18PF	5%	50V
C18	1-163-715-11	(IT, EA, AE6, AE7).... CERAMIC CHIP	33PF	5%	50V
C19	1-163-085-00	CERAMIC CHIP	2PF	0.25PF	50V
C20	1-163-092-00	(US, CND, AEP, UK, E, FR).... CERAMIC CHIP	9PF	0.25PF	50V
C20	1-163-095-00	(IT, EA, AE6, AE7).... CERAMIC CHIP	12PF	5%	50V
C21	1-126-163-11	ELECT	4.4MF	20%	16V
C22	1-126-160-11	ELECT	1MF	20%	50V
C23	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C24	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C25	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C26	1-126-161-11	ELECT	2.2MF	20%	35V

CF1	1-577-072-11	FILTER, CERAMIC
CF2, CF3	1-579-080-71	FILTER, CERAMIC
CNP1	1-566-199-11	PIN, CONNECTOR (PC BOARD) 6P
CT1-4, CV1-4	1-151-676-11	(US, CND, AEP, UK, E, FR)....CAP, VAR
CT1-4, CV1-4	1-151-676-11	(IT, EA, AE6, AE7)....CAP, VAR
D1	8-719-800-76	DIODE 1SS226
IC1	8-759-605-77	IC CXA1019M
IFT1	1-404-837-31	TRANSFORMER, IF
J1	1-563-836-21	JACK (EARPHONE)
L1	1-402-511-11	(US, CND, AEP, UK, E, FR).... ANTENNA, FERRITE-ROD (MW)
L1	1-402-512-11	(IT, EA, AE6, AE7).... ANTENNA, FERRITE-ROD (MW)
L2	1-459-435-00	COIL (WITH CORE)
L3	1-459-436-00	(US, CND, AEP, UK, E, FR)....COIL (WITH CORE)
L3	1-459-418-00	(IT, EA, AE6, AE7)....COIL (WITH CORE)
L4	1-405-989-51	COIL, OSC
L5	1-410-294-11	INDUCTOR, MICRO
PL1	1-518-669-11	LAMP, PILOT
Q1	8-729-904-87	TRANSISTOR 2SB1197K-R
Q2	8-729-901-78	TRANSISTOR 2SC2412K-R
Q3	8-729-901-78	TRANSISTOR 2SC2412K-R
Q4	8-729-904-87	TRANSISTOR 2SB1197K-R
Q5	8-729-901-78	TRANSISTOR 2SC2412K-R

RESISTOR

R1	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R2	1-216-037-00	METAL GLAZE	330	5%	1/10W
R3	1-249-441-11	CARBON	100K	5%	1/4W
R4	1-216-033-00	METAL GLAZE	220	5%	1/10W
R5	1-216-005-00	METAL GLAZE	15	5%	1/10W
R6	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R7	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R8	1-216-017-00	METAL GLAZE	47	5%	1/10W
R9	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R10	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R11	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R12	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R13	1-216-019-00	METAL GLAZE	56	5%	1/10W
R14	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R15	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R16	1-216-295-00	METAL GLAZE	0	5%	1/10W
R17	1-216-295-00	METAL GLAZE	0	5%	1/10W
R18	1-216-296-00	METAL GLAZE	0	5%	1/8W
R19	1-216-295-00	METAL GLAZE	0	5%	1/10W
R20	1-216-295-00	METAL GLAZE	0	5%	1/10W
R21	1-216-296-00	METAL GLAZE	0	5%	1/8W
R22	1-216-025-00	METAL GLAZE	100	5%	1/10W
R23	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R24	1-216-296-00	METAL GLAZE	0	5%	1/8W

RV1	1-241-203-11	RES, VAR, CARBON 50K (VOLUME)
S1	1-571-478-11	SWITCH, SLIDE (BAND)
SP1	1-503-552-11	SPEAKER

Ref.No	Part No.	Description
		ACCESSORIES & PACKING MATERIALS
		**********
	*3-362-143-01	INDIVIDUAL CARTON
	3-752-194-01	(E, EA)....MANUAL, INSTRUCTION (JAPANESE, ENGLISH, KOREAN, ARABIC)
	3-752-194-11	(Ė, AE7)....MANUAL, INSTRUCTION (SPANISH, PORTUGUESE, DUTCH, SWEDISH)
	3-752-194-21	(US, CND, UK, IT, FR, AE6, AE7).... MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, ITALIAN)

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SUPPLEMENT-1

File this supplement with the service manual.

1. SECTION 5 EXPLODED VIEWS (Service Manual Page 19, 20.)

(Incorrect)

Ref.No	Part No.	Description	Remarks
901	1-809-142-11	(EXCEPT US)....CLOCK MODULE	
901	1-809-142-21	(US)....CLOCK MODULE	

(Added)

Ref.No	Part No.	Description	Remarks
901-1	1-809-141-11	(EXCEPT US)....CLOCK MODULE	
901-1	1-809-141-21	(US)....CLOCK MODULE	
901-2	1-589-286-11	(EXCEPT US)....MOUNTED, MICROCOMPUTER	
901-2	1-589-286-21	(US)....MOUNTED, MICROCOMPUTER	

2. SECTION 6 ELECTRICAL PARTS LIST (Service Manual Page 21.)

(Incorrect)

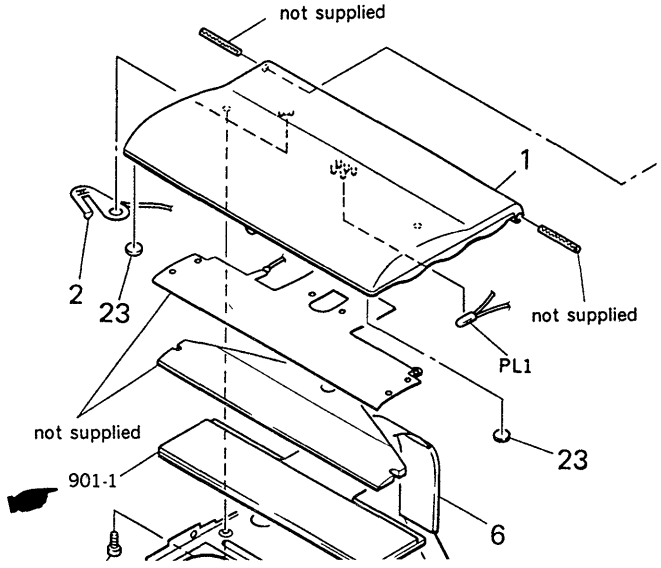
Ref.No	Part No.	Description	Remarks
901	1-809-142-11	(EXCEPT US)....CLOCK MODULE	
901	1-809-142-21	(US)....CLOCK MODULE	

(Added)

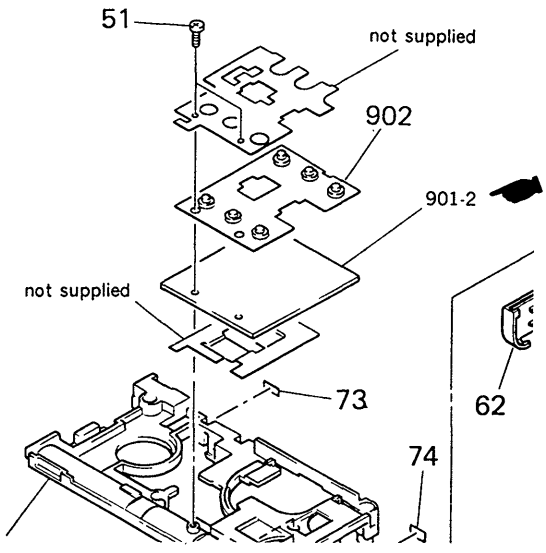
Ref.No	Part No.	Description	Remarks
901-1	1-809-141-11	(EXCEPT US)....CLOCK MODULE	
901-1	1-809-141-21	(US)....CLOCK MODULE	
901-2	1-589-286-11	(EXCEPT US)....MOUNTED, MICROCOMPUTER	
901-2	1-589-286-21	(US)....MOUNTED, MICROCOMPUTER	

● ☛: added portion

6-1 CABINET (LID, FRONT) (Service Manual Page 19.)



6-2 CABINET (REAR), CHASSIS (Service Manual Page 20.)



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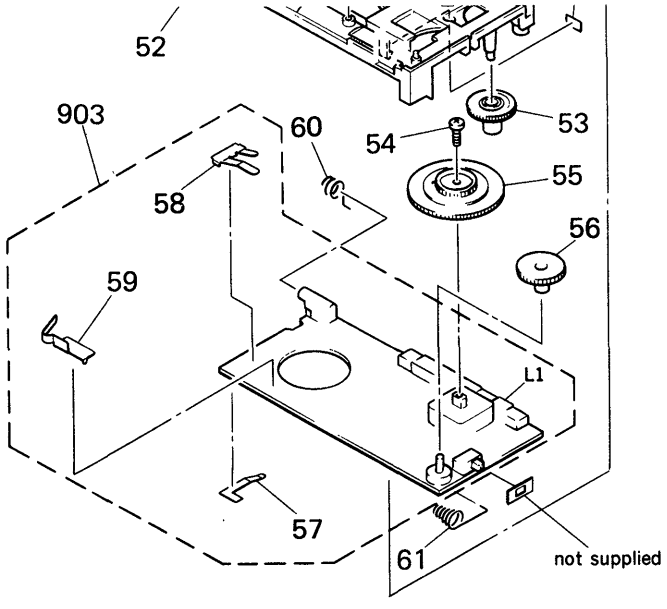
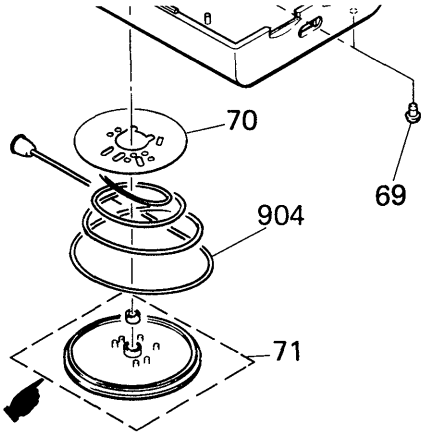
CORRECTION-1

File this correction with the service manual.

☛ : **Correct Portion**

SECTION 6 EXPLODED VIEWS (See page 20.)





Ref.No	Part No.	Description	Remarks
51	3-309-597-21	SCREW (1.4), TAPPING	
52	*3-903-533-01	CHASSIS	
53	3-903-518-01	KNOB (TUNE)	
54	3-880-990-00	SCREW (1.7X3),FLAT,(+) SPECIAL	
55	3-903-514-01	GEAR (TUNING CAPACITOR)	
56	3-903-516-01	KNOB (VOL)	
57	3-903-512-01	PLATE (C), CONTACT	
58	3-903-501-01	TERMINAL (-), BATTERY	
59	3-903-502-01	TERMINAL (+), BATTERY	
60	3-363-924-01	SPRING (E.P)	
61	3-903-505-01	SPRING, BATTERY COIL	
62	3-903-521-01	LID, BATTERY CASE	
63	3-903-523-01	TERMINAL, BATTERY	
64	7-621-772-00	SCREW +B 2X3	
65	3-903-517-01	BEARING	
66	3-903-509-01	PLATE (B), CONTACT	

Ref.No	Part No.	Description	Remarks
67	3-364-240-01	SPRING (FOOT), CONTACT	
68	3-903-534-01	CABINET (REAR)	
69	3-363-921-01	FOOT (CONTACT)	
70	3-903-507-01	PLATE (A), CONTACT	
71	X-3362-188-1	REEL ASSY	
73	3-831-441-XX	CUSHION	
74	*3-365-058-01	SPACER (CH)	
901-2	1-589-286-11	(EXCEPT US)....MOUNTED, MICROCOMPUTER	
901-2	1-589-286-21	(US)....MOUNTED, MICROCOMPUTER	
902	*1-572-447-11	SWITCH, RUBBER KEY	
903	*A-3661-146-A	(IT, EA, AE6, AE7).... PC BOARD ASSY, MAIN(NARROW)	
903	*A-3661-147-A	(US, CND, AEP, UK, E, FR).... PC BOARD ASSY, MAIN (WIDE)	57-59, LP1
904	1-590-004-11	CORD, ANTENNA	

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CORRECTION-2

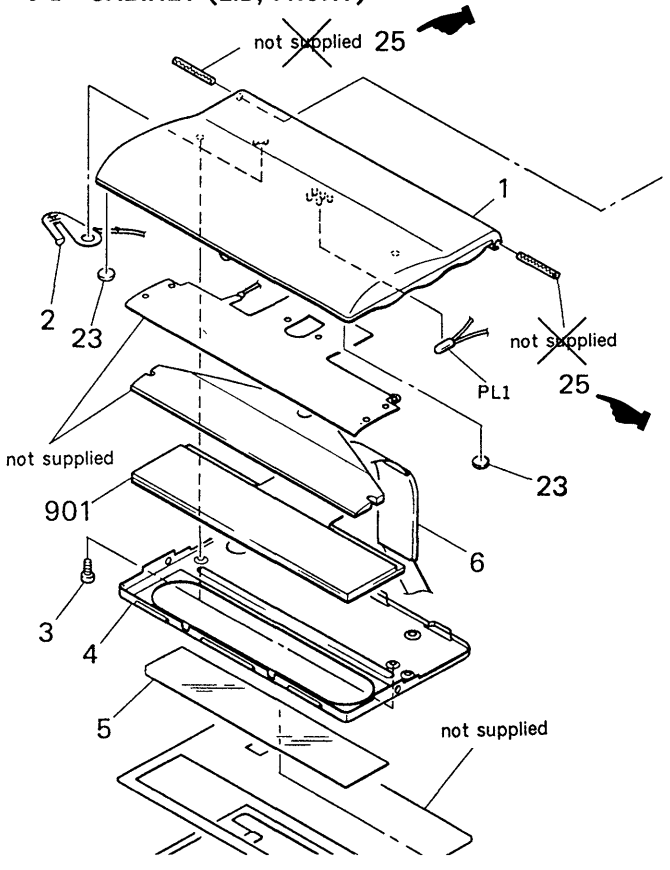
File this Correction with the Service Manual.

: Correct Portion

SECTION 6 EXPLODED VIEWS (See page 19.)

Ref. No.	Part No.	Description	Remark
25	* 7-626-308-71	SPRING-PIN 1.4X16	

6-1 CABINET (LID, FRONT)



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